

PLEASE ENTER *AP* 4/14/06

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of claims:**

**Claim 1-31**

**Claim 32 (new):** A battery capacity calculating method for calculating a residual capacity and/or residual power of a secondary battery, comprising:

calculating an equilibrium voltage curve  $C_{equ}$  showing a relation between a discharged capacity and an equilibrium voltage in said secondary battery;

measuring a terminal voltage  $V_{mea}$  and a current value  $I$  of said secondary battery at a time of discharging;

calculating a discharged capacity  $Q_{mea}$  of said secondary battery based on the terminal voltage  $V_{mea}$  and the current value  $I$ ;

calculating an apparent equilibrium voltage  $V_{ocv}$  by adding a voltage drop  $\Delta V_{dc}$  by a direct current resistance  $R_{dc}$  to the terminal voltage  $V_{mea}$ ;

calculating an apparent discharged capacity  $Q_{ocv}$  corresponding to the apparent equilibrium voltage  $V_{ocv}$  calculated based on the equilibrium voltage curve  $C_{equ}$ ;

calculating a capacity shift  $\Delta Q$  being a difference between the discharged capacity  $Q_{mea}$  and the apparent discharged capacity  $Q_{ocv}$ ; and

estimating a discharge curve  $C_{pre}$  in a future based on the capacity shift  $\Delta Q$  calculated at said capacity shift calculating step.

**Claim 33 (new):** The battery capacity calculating method according to claim 32, wherein when a state of said battery is close to the last stage of discharging, a reduction rate  $dQ$  of a capacity shift to a discharged capacity is calculated based on the discharged capacity  $Q_{mea}$  and the capacity shift  $\Delta Q$ , and the discharge curve  $C_{pre}$  in the future is estimated based on the capacity shift  $\Delta Q$  and the reduction rate  $dQ$ .